

# Notice of Allowability

Application No.

09/881,477

Examiner

Monique M Wills

Applicant(s)

NEUTZLER

Art Unit

1746

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the election filed August 13, 2004.
2. ☒ The allowed claim(s) is/are 4-21 and 23.
3. ☒ The drawings filed on 14 June 2001 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All    b) ☐ Some\*    c) ☐ None    of the:
  1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

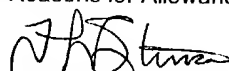
Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

## Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date \_\_\_\_\_
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_.

  
**FRANKIE L. STINSON**  
**PRIMARY EXAMINER**  
**GROUP 3400 11a**

*EXAMINER'S AMENDMENT*

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

The application has been amended as follows:

Claims 1-3 & 22 have been canceled.

*EXAMINER'S STATEMENT OF REASONS FOR ALLOWANCE*

The following is an examiner's statement of reasons for allowance: claims 4-15 & 23 are allowable over the prior art of record, because the prior art is silent to a gas separator assembly for use with a direct oxidation fuel cell comprising an inlet end coupled with an anode chamber to receive anode effluent including unreacted fuel and water and carbon dioxide; and a conduit component coupled with said inlet end to which anode effluent is conveyed, wherein said conduit has walls comprised of substantially porous, hydrophobic material, and defining a tortuous path exiting said conduit, whereby carbon dioxide is separated out from said anode effluent.

Claims 16-20 are allowable over the prior art of record, because the prior art is silent to a gas separation apparatus for use with a direct oxidization fuel cell comprising means for introducing anodic effluent from the anode chamber of the fuel cell; means for conveying anodic effluent from said anode chamber along a hydrophobic tortuous path; and means for limiting flow out of said conveying means to create backpressure within said conveying means

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whereby carbon dioxide is separated out from said anode effluent as said anode effluent is conveyed along said hydrophobic tortuous path. Claim 21 is allowable over the prior art of record, as a method of operating the device of claim 16.

The prior art, such as Wilkinson et al. U.S. Patent 6,413,664 teaches a fuel cell separator plate with discrete fluid distribution features, including impregnating the separator plate with resin to improve hydrophobicity. However, the reference is silent to a gas separator with a conduit having walls comprised of substantially porous, hydrophobic material, defining a tortuous path exiting the conduit, whereby carbon dioxide is separated out from anode effluent. The reference is also silent to a means for limiting flow out of a conveying means to create back pressure within said conveying means, whereby carbon dioxide is separated out from anode effluent, as said effluent is conveyed along a hydrophobic tortuous path.

Therefore, the instant claims are patentably distinct from Wilkinson.

### Conclusion

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Monique Wills whose telephone number is (571) 272-1309. The Examiner can normally be reached on Monday-Friday from 8:30am to 5:00 pm.

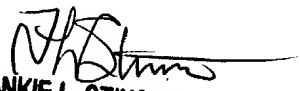
If attempts to reach Examiner by telephone are unsuccessful, the Examiner's supervisor, Michael Barr, may be reached at 571-272-1414. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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